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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NOORISTANY, SULAIMAN

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/531,888	Applicant(s) IKEDA ET AL.	
	Examiner SULAIMAN NOORISTANY	Art Unit 2446	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,7,15 and 20-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,7,15 and 20-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/20/2004, 5/8/2008</u> | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

This Office Action is response to the application (10/531888) filed on 20 April 2005.

Claim Rejections - 35 USC § 103

The text of those sections of the Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jhonson** U.S Patent App. No. **US 20060036763** in view of **Frelechoux** US Patent No. **US 7227838** further in view of **Stracke** U.S Patent No. **US 6,047,330**.

Regarding claim 1, Johnson teaches wherein a method for a router setting, the method comprising:

requesting, by a mobile router device virtual router information for a virtual router process when the mobile router device detects a connection to a local area network **(new router transmit discovery request – [0056-0058]);**

transmitting, by a first router device, the virtual router information in response to the request by the mobile router, the first router device operating as a virtual router receiving the virtual router information by the mobile router device **(the root router “here is same as first router” transmits an instruction to the new router – [0058]).**

With respect to claim 1, Johnson teaches the invention set forth above except for the claimed “making a setting required for the virtual router process by the mobile router

Art Unit: 2446

device, based on the virtual router information;

wherein the virtual router information includes a priority of the first router device and a preference indicating whether a performance of the first router device is sufficient for operating as a master router device, and the mobile router device calculates its priority based on the priority of the first router device and the preference second”.

O’Riordan teaches that it is well known to have system for making a setting required for the virtual router process by the mobile router device, based on the virtual router information **(Each SVI may be formed by setting up suitable data structures that represents the new SVI and is associated with the designated router – col. 10, lines 40-45);**

wherein the virtual router information includes a priority of the first router device and a preference indicating whether a performance of the first router device is sufficient for operating as a master router device, and the mobile router device calculates its priority based on the priority of the first router device and the preference second **(FIG. 6 is a diagrammatic representation of a redundancy router system incorporating the hot standby router protocol (HSRP) in accordance with an alternative embodiment of the present invention – col. Col. 12, lines 40-65)** in order to make the system more efficient and providing redundancy in a network for forwarding data between different hosts within such network (col. 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Jenson’s invention by having the routers share the same IP and MAC address on each logical interface. The routers do not each also use a

Art Unit: 2446

unique IP and MAC address in addition to the shared IP and MAC address, in contrast to conventionally configured routers of the hot standby router protocol (HSRP). In addition, although the host is only aware of a single virtual router, the routers within the HSRP group are aware of each other. All other routers in the network also see every router in the HSRP group. That is, the routers each have their own MAC and IP addresses through which they communicate with each other. The routers of a particular HSRP group communicate with each other, for example, to determine which router is to be the active router and which is to be the standby router. Managing multiple routers having unique IP and MAC addresses within an HSRP group results in an undesirable level of complexity. Additionally, managing and ensuring scalable growth with an ever increasing number of routers within each HSRP group will likely become a significant problem in the near future, where it would be desirable to provide an alternative redundant router scheme, as taught by O'Riordan (col. 1).

Stracke further teaches that is well known to have the virtual router information processing section executes a process to request the information when the information processing section detects a connection to the local area network (**The Manage Router Topology task receives (detect) external heartbeat packets from the IP multicast task and checks the virtual network topology database for any new possible router connections – Col. 4, lines 51-54**), and

the other router device sends the information to the virtual router information processing section device based on the request (**Fig. 3-5**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Jenson's invention by referring to the heartbeat multicast packet which contains the TTL value in the header of the packet. The TTL value is also placed in the body of the packet. THE TTL value is decremented at each hop, but the receiving router knows what the TTL value is by reading the body of the packet. The originating router gets an estimate of how far away the receiving router is when it receives the response packet from the receiving router (i.e. the receiving router is less than TTL hops away from the originating router). The router uses the TTL values to find the closest routers. It balances the efficiency of the network connections with the distance of the routers to create a balanced network topology. Connections are established with the routers that meet these criteria. Furthermore, the system relies on the IP multicast network. The IP network carries multicast packets. The address of the sender is contained in the multicast packet. If a router wants to talk to the sending router, it talks to that router through the established virtual network. If the virtual network does not exist, then it attempts to connect to the sending router anyway, as taught by Stracke.

Claim 7 list all the same elements of **claim 1**, but in mobile router device rather than method form. Therefore, the supporting rationale of the rejection to **claim 1** applies equally as well to **claim 7**.

Art Unit: 2446

Claims 4, 11, 15, 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Johonson** U.S Patent App. No. **US 20060036763** in view of **Frelechoux** US Patent No. **US 7227838** further in view of **Stracke** U.S Patent No. **US 6,047,330** further in view of **Jenson** US Patent App. No **US 20020186653**.

Regarding claim 4, Johnson, O'Riordan & Stracke together taught a router device in claim 1 above. Johnson, O'Riordan & Stracke are silent in terms "*virtual router identifier, a virtual IP address and a virtual MAC address*"

Jenson teaches that it is well known to have system wherein the virtual router information includes a virtual router identifier, a virtual IP address and a virtual MAC address ((**virtual Internet Protocol (IP) address, Col. 1, [0009], medium access control (MAC) network address, Page. 1, [0010]**)).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Johnson's invention by utilizing a network typically comprises a number of network nodes connected together by communications media. Information is passed from one network node to another from a source until it arrives at an intended destination. The series of nodes and communications media between a source and destination may be collectively referred to as a "path." From time to time, a node may go down in a given path, and an alternate or redundant path is required to communicate the information. Conventional solutions, however, may require expensive hardware or software to provide the alternate path. Furthermore, conventional solutions may be relatively complex thereby increasing difficulty and cost in implementing the

Art Unit: 2446

technology for a particular network. Consequently, there may exist a substantial need for a method and apparatus to provide redundancy in a network while reducing the cost and/or complexity of the network, as taught by Jenson [0001].

Regarding claim 11, Jenson further teaches wherein the virtual router information processing section, when receiving the virtual information, further executes a process to send virtual router information being set to the other router device (“The active network node may periodically send a control message to the standby (second node) network node. The control message may inform the standby (second node) network node that the active network node is active or in operation” -- [0010]).

Regarding claim 15, Jenson further teaches wherein the information processing section sends the information at a regular interval (The active network node may periodically send a control message to the standby network node -- Page. 1, [0010], The second network node may determine whether it receives control information from the first network node during a predetermined time interval at – Page. 3, [0023]).

Regarding claim 20, Jenson teaches that it is well known to have system wherein the virtual router information includes a virtual router identifier, a virtual IP address and a virtual MAC address ((virtual Internet Protocol (IP) address, Col. 1, [0009], medium access control (MAC) network address, Page. 1, [0010]).

Regarding claim 21, Jenson teaches that it is well known to have system wherein the virtual router information includes a virtual router identifier, a virtual IP address and a virtual MAC address ((virtual Internet Protocol (IP) address, Col. 1, [0009], medium access control (MAC) network address, Page. 1, [0010]).

Regarding claim 22, Jenson teaches that it is well known to have system wherein the virtual router information includes a virtual router identifier, a virtual IP address and a virtual MAC address ((virtual Internet Protocol (IP) address, Col. 1, [0009], medium access control (MAC) network address, Page. 1, [0010]).

Regarding claim 23, Jenson teaches that it is well known to have system wherein the virtual router information includes a virtual router identifier, a virtual IP address and a virtual MAC address ((virtual Internet Protocol (IP) address, Col. 1, [0009], medium access control (MAC) network address, Page. 1, [0010]).

Regarding claim 24, Stracke further teaches wherein the information includes a preference for the second router device to calculate its own priority (Fig. 4-5 – col. 2, lines 45-50).

Regarding claim 25, Stracke further teaches wherein the information includes a preference for the second router device to calculate its own priority (**Fig. 4-5 – col. 2, lines 45-50**).

Response to Arguments

Applicant's arguments with respect to claims 1, 4, 7, 11, 15, 20-25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's arguments filed on 10/29/2008 have been considered but are moot in view of the new ground(s) of rejection **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sulaiman Nooristany whose telephone number is (571)

Art Unit: 2446

270-1929. The examiner can normally be reached on M-F from 9 to 5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Pwu, can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sulaiman Nooristany 0/12/2009

/Jeffrey Pwu/

Supervisory Patent Examiner, Art Unit 2446